Printing Industry generates a wide range of products which require in every step of our everyday life. Starting from newspapers, magazines, books, post cards to memo pads and business order forms each are the products of printing industry. Printing is a process for reproducing text and image, typically with ink on paper using a printing press. There are various types of printing process for example offset printing, modern printing, gravure printing, flexographic printing etc. Offset printing is a widely used printing technique where the inked image is transferred from a plate to a rubber blanket, then to the printing surface. When used in combination with the lithographic process, the offset technique employs a flat image carrier on which the image to be printed obtains ink from ink rollers, while the non printing area attracts a film of water, keeping the non printing areas ink free. Gravure printing is a printing technique, where the image to be printed is made up of small depressions in the surface of the printing plate. It is divided into three broad product areas; packaging printing, publication printing and speciality printing. Printing technology is often carried out as a large scale industrial process, and is an essential part of publishing and transaction printing. This is the age of hi fi, jets and computers. Rapid advancements in science and technology have made their impact on the printing industry of the world too. The old techniques of printing have become obsolete and made way for the new technology. The printing industry is just one example of an entire industry movement that is changing while keeping up with the development of new technologies. The proliferation of emerging technologies has dictated a rebirth of the printing industry. The Indian Printing Industry is well established and presently growing at 12% per annum.

This book majorly deals with typographic technology, photo scanning systems, sequence of steps in the printing processes, size and scope of the printing industry, high volume printing technologies for the production of polymer electronic structures, inking system, film high contrast printing, principle of planographic printing, modern printing process, ink jet etc.

The book contains the latest printing processes like web, gravure, flexo, security and offset printing. This book is an invaluable resource for new entrants, technicians, craftsmen and executives working with printing industries.

Contents
1. The Beginning of Printing
   Typographic Technology
   Hand composition
   Linotype
   Monotype
   Ludlow
   Photo-scanning systems
   Systems components
   Digital typesetting
   Scanning and laser systems
   Basic classification of typefaces
   Planning a Page
   Type Measurement

2. The Printing Industry
   Introduction
   Development of Ideographs
   Development of Phonetic Symbols
   Printing Technology
   Sequence of Steps in the Printing Processes
   Size and Scope of the Printing Industry
   Commercial Printing
   Special Purpose Printing
   In-Plant Printing
   Preparing for a Career in Printing
   Career Advancement

3. Printing Press
   Press Development
   Understanding Offset Press Operation
   Feeding Unit
   The Registration Unit
   Multicolor Sheet-Fed Presses
   The Press Console
   Components of a Web Press
   Towards Total Automation

4. High Volume Printing Technologies for the production of Polymer Electronic Structures
   Why Printing in Polymer Electronics?
   Fundamental Concepts for the Production of Polymer Electronic
   Printing Technologies
   State of the Art in Printing Electronics
   Challenges of Printing Polytronics
   Conclusion

5. Sheet-Fed Offset Machines
   Names of the machines
   Mechanical features
   Functions of the blower foot
   Sheet insertion and transfer
   Gripper designs
   Inking system
   Distribution system
   Wash-up device
   Adjustment of rollers
   Maintenance of rollers
Different dampening systems
Conventional dampening system
Cleaning of dampeners
Brush feed dampening system
Plate cylinder
Blanket cylinder
Impression cylinder
Adjustment of cylinders
Delivery mechanism
Qualities of a good delivery system
Attachments on the delivery part (board)
Miscellaneous operations
6. Printing Processing
Printing Exposing
7. Film High contrast Printing
Tonal Deletion
Tone Line
Making the Separations
Printing Separations
Bas Relief
Colour Manipulations
Sandwiching
Standard Negatives
Data Sheets
Evaluating Contact Sheets
Evaluating for Colour Filtration
Fine Colour Printing
Controlling Colour Materials
The New High-Speed Film
Colour Transparency Films
Printing, Colour Positives
Test Prints
Processing Ektachrome 14 Paper
Processing Cibachrome A-11
8. Origin of Planigraphy
Principle of Planographic Printing
Direct printing process
Materials, Tools and Equipments
Dampening cloth
Vaseline
9. Offset Press
Dampening Solutions
Feeding & Registering system
The delivery system
Mabeg feeder
Sheet Detection
Press Make ready, and Operation
Feedboard setting
Setting the sheet path
Fitting the plate
Ink preparation
Multicolour printing
The multicolour press
The Perfector Press
Infra-Red Drying on Web-Offset
Offset printing Machines
Business Form Production
10. Paper Technology
From plant to paper:
Europe's first paper mill
America's first paper mill
Paper Specification
Paper faults During Printing
Make Ready Procedure
Types of Paper
Paper Requirements For Offset Printing
Testing the properties which effect print quality
Types of Papers
Beating and Hydration
Requirements for Printability of Paper
Printing & Paper Troubles & How to Overcome
The Indian Paper Industry
International Paper Sizes
Paper Calculation
11. Modern Printing Process
Estimate Paper Need
Ink Jet
Film Plotting Machine
Computer to Plate Technology (CTP)
Computer To Plate Scanners
Digital Colour Presses & Computer to Press
Making digital plate production cheaper
The Digital Offset Colour Revolution : E-Print 1000
Market forces
Quality & Productivity
Anilox Offset
More Economical For Frequent Partial Editions with high Colour Content
Waterless Anilox Offset
Produce a complete newspaper by computer software
12. Pad Printing Application
13. Gravure Printing
The Gravure Industry
Basic Gravure Concepts
Cylinder Construction and Preparation
Copper Plating and Polishing
Gravure Presswork
Cylinder and Doctor Blade Considerations
Impression Rollers
Trends in Gravure
14. Web Offset Machines
Design of web machines
Reel stand unit
Main parts of printing unit